NCDOT Division Engineer Project Solicitation and Ranking Process
Prioritization 3.0

Introduction

The NCDOT Division Engineers are required by STI legislation to develop a local input methodology for all transportation projects (highway, bike and pedestrian, public transportation, aviation, rail and ferry) within their respective areas that may compete for state funding. In conjunction with our continuous, cooperative and comprehensive planning relationship with local Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs), NCDOT Division Engineers have developed the following project solicitation process and local input methodology.

Applicability

The project solicitation process will apply to all projects submitted by the Division Engineer, and the local input methodology will apply to all projects (regional impact and division needs) to be ranked by the Division Engineer within their geographic boundaries (and adjacent boundaries if a given project spans more than one Division).

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NCDOT Division Engineer Project Solicitation and Ranking Process
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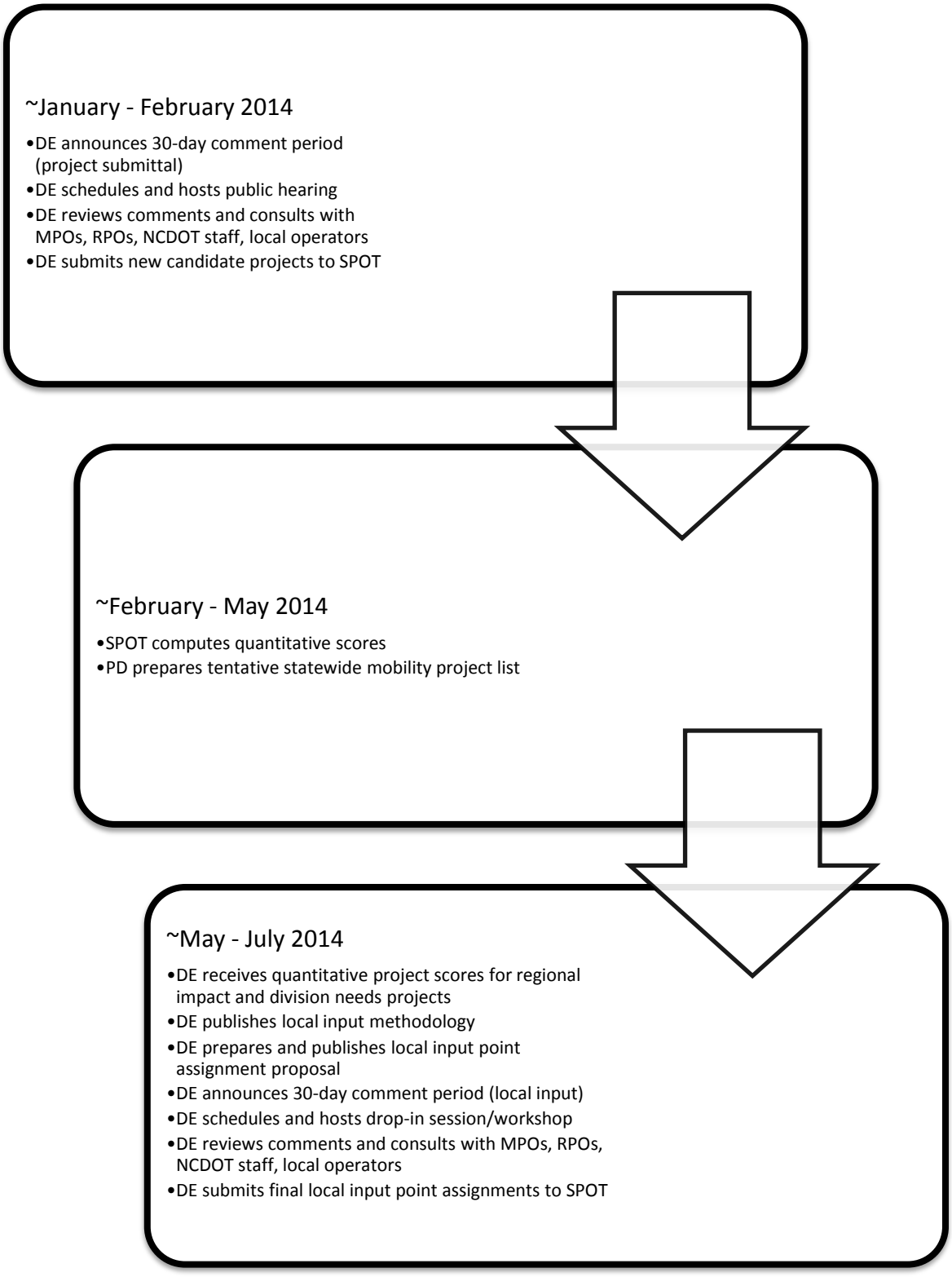
Schedule Overview



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Schedule Details

Project Solicitation:

Each transportation Division will solicit candidate projects for 30 days prior to the project submittal deadline. **The results of this process will be reviewed with each of the MPOs and RPOs in the Division, appropriate NCDOT Transit Division (all modes) staff, and local aviation, rail and public transit operators prior to submitting new candidate projects.** Project suggestions received will be shared and coordinated with the respective MPO and/or RPO in each Division and with appropriate NCDOT transit division staff to avoid duplication and ensure maximum number of project submittals per Division is not exceeded. The Division will then submit the selected project list using NCDOT's SPOT On!ine tool (web based system) for quantitative scoring no later than the project submittal deadline.

Project Ranking:

The Division Engineer will evaluate the full list of new and previously evaluated projects for the Division during the local input review period assigning local input points in consultation with the MPOs and RPOs in the division, and appropriate NCDOT Transit Division (all modes) staff for submission to the Strategic Prioritization Office of Transportation (SPOT) by the local input deadline.

Public Input Process

Project Solicitation:

Each Division Engineer's office will announce[1] the 30 day project solicitation period to all governments, MPOs, RPOs, NCDOT staff, local airport, rail and transit operators, and interested persons in the Division's geographic boundaries. In addition, each Division will host public meetings at a central location within each Division during the 30 day project solicitation period. Information regarding the public meeting, and specific methods for providing input (email, phone, mail, etc.), will be advertised[1] to stakeholders. **The results of the 30 day project solicitation period and the public input received will be reviewed by the Division Engineer in consultation with the MPOs and RPOs in the Division, appropriate NCDOT transit division staff, and local aviation, rail and transit operators.** Through this collaboration, the Division Engineer will determine the list of candidate projects to submit for technical evaluation, while avoiding duplicate project submissions and ensuring the maximum number of project submittals is not exceeded. The Division Engineer will be able to submit new transportation

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projects (across all modes) based upon the P3.0 Workgroup and Department's agreed upon allowances.

Project Ranking:

The Division Engineer will receive the quantitative scores for the projects eligible for local input points once released by the SPOT Office. The Division Engineer will be responsible for assigning local input points to regional impact and division needs projects for their area. The Division Engineer will publish[1] his/her local input methodology, which will be used as the basis to assign preliminary points to all regional impact and division needs projects within their division and/or adjacent divisions. Each Division Engineer's office will then announce[1] a 30 day comment period to solicit input on this information and provide specific methods for providing input (email, phone, mail, etc.). The 30 day comment period will vary by Division, and will take place during the designated window for assigning local input points. During this period, each Division will host public drop-in/workshop sessions at a central location within each Division prior to the final assignment of local input points. Advertisement[1] soliciting input during the 30 day comment period, and for the drop-in/workshop sessions, will be made to the public, and to MPOs, RPOs, NCDOT staff, local airport, rail and transit operators, and interested persons in the Division's geographic boundaries.

The Division Engineer will review comments received in accordance with his/her local input methodology and in consultation with the MPOs and RPOs in the Division, appropriate NCDOT Transit Division (all modes) staff, and local aviation, rail and transit operators. **Through this evaluation and collaboration, the Division Engineer will determine the final local input point assignments per eligible regional impact and division needs project within their division and/or to projects in adjacent divisions to submit for final evaluation.** All final point assignments will be published[1].

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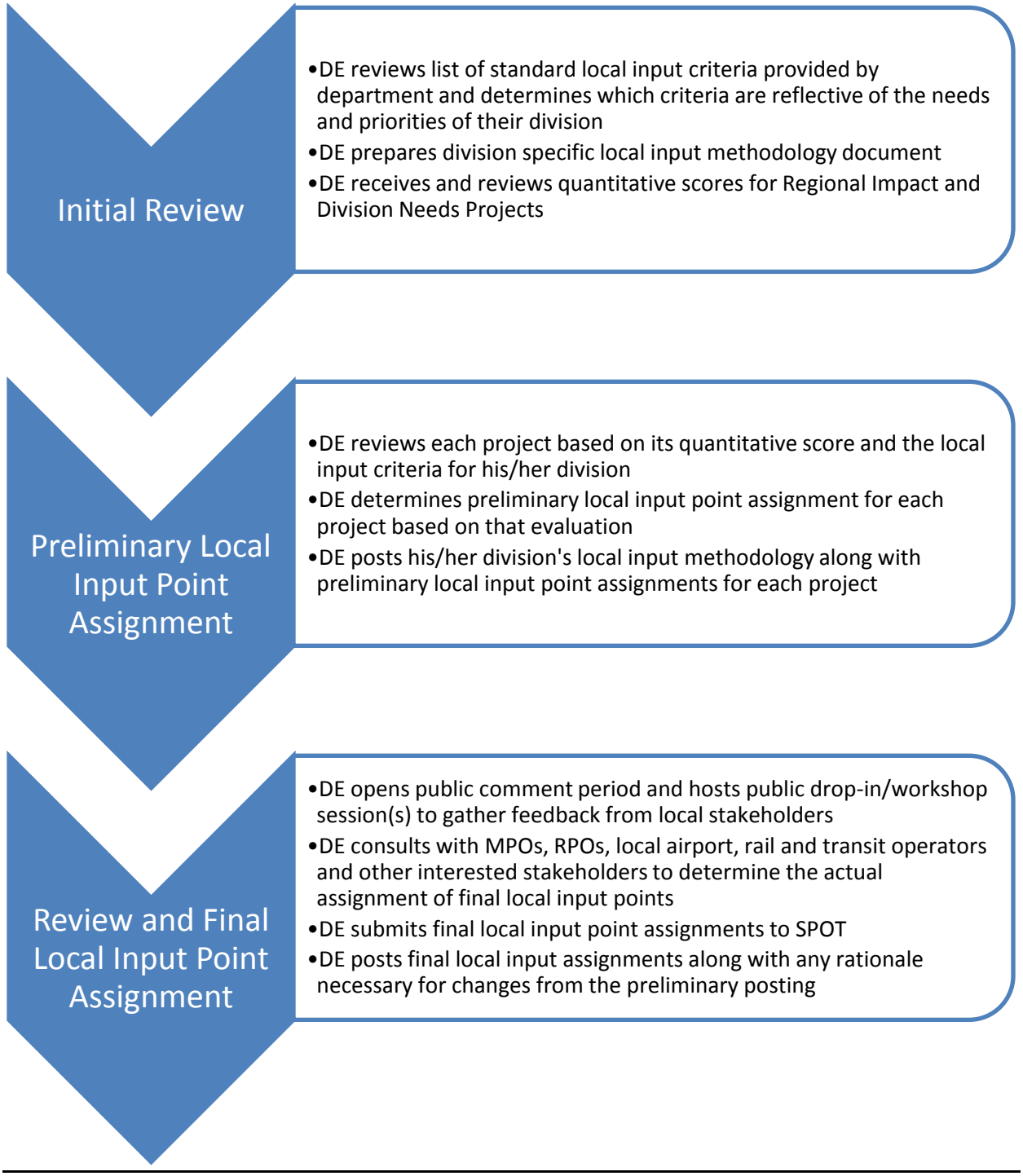
Ranking Process Overview



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NCDOT Division Engineer Project Solicitation and Ranking Process
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Ranking Process

Introduction:

The criteria outlined below will be used in conjunction with prioritization scores to create a ranking of projects in the regional impact and division needs categories that will be used by the Division Engineer in determining preliminary and final local input point assignments for projects within their division and/or to projects in adjacent divisions. **The Department's quantitative scores for projects and this ranking process will act as a guide in determining a preliminary rank-ordered list of projects.**

Below is a standardized list of criteria available for use in developing a set of local ranking criteria for each division. The Division Engineer will choose a minimum of four criteria, but no more than ten, from this list for evaluating highway projects, and minimum of two (no maximum) criteria from this list for evaluating projects in each applicable non-highway mode for their division specific local input methodology. The Division Engineer will determine the combination of criteria that best reflects the needs and priorities of their respective area. The Division Engineer will then assign a percent weight to each criterion selected such that the sum of the percent weights for all criteria selected (per mode) is equal to 100%. No single criteria should weigh less than 5% or more than 50%.

For each criterion, a detailed description is provided, along with specific scoring standards. Each Division Engineer will publish[1] their specific set of criteria and percent weights prior to/in conjunction with posting preliminary point assignments for projects within their division and/or to projects in adjacent divisions.

Standard Criteria – Descriptions:

- **Existing Congestion:** a measure of the volume/capacity ratio of a facility or transit service taken from SPOT data.
- **Safety Score**: a calculation based on the crash frequency and severity along sections of a particular roadway. The safety score is the score generated in the quantitative scoring process and is calculated in accordance with the SPOT calculation detailed in appendix 1 of this document.
- **Cost Effectiveness (Highway):** a calculation of the cost per vehicle to improve a road one mile. This calculation allows different types of roads to be compared based on how much it costs to improve the road per individual vehicle.

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- **Freight Volume:** the number of trucks or equivalent vehicles that utilize the facility on a daily basis. Percentage of truck volume of average daily traffic converted to a number of trucks or equivalent.
- **Transportation Plan Consistency:** a measure to determine if the proposed project is included in an existing adopted transportation plan for the area.
- **Corridor Continuity:** a measure of the project completing or continuing improvements on a defined transportation corridor. For this purpose, a "corridor" is defined as one numbered route between two destinations (city, large employment center, event center, etc., or a state line), OR a continuous path between two destinations (city, large employment center, event center, etc., or a state line) even if it uses multiple numbered routes. For instance, all of the following are examples of corridors: I-95 from Virginia to South Carolina, US 17 between Wilmington and New Bern, and US 64/NC 49 between Raleigh and Charlotte.
- **Multimodal Accommodations:** a measure of the degree to which the project incorporates pedestrian, bicycle or transit elements into a project, especially those that are part of a larger system.
- **Serves Activity Center(s):** a measure of the project's proximity to an employment center, trauma center, institution of higher learning, tourist center or other high traffic facility/site.
- **Shoulder Width:** a measure of the degree to which the project improves existing shoulder
- **Lane Width:** a measure of the degree to which the project improves lane width **NC Division of Aviation Rating:** a measure of the impact of the project on airport development as rated based on priority and need in accordance with the NCDOA rating system. The DOA rating system categorizes project into three prioritization groupings and then further into project categories and subcategories. Priority Categories are listed numerically basically where 1- high, 2- medium and 3- optional. Project Categories define the major type of project while the subcategory provides some granularity to the prioritization process.
- **Transit Expansion:** a measure of the project expanding passenger service on existing routes or opening new routes for increased service as calculated by trips per dollar spent (state match).
- **Rail System Continuity:** a measure of the degree to which the project contributes to a larger rail system. Examples include providing a station on a corridor, a line that accesses a port, an intermodal facility that strengthens a port, a dual access railroad.
- **Rail System Connections:** a measure of the degree to which the project builds or strengthens intermodal access.

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- **Rail Safety:** a measure of the degree to which the project improves safety at railroad crossings.
- **Ferry Expansion:** a measure of the degree to which the project expands passenger service on existing routes or opens new routes for increased service.
- **Economic Development Potential:** a measure of the proximity to existing water and/or sewer infrastructure.
- **Project Readiness:** a measure of the readiness of a project based on project development/NEPA status and/or right of way acquisition status.

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Standard Criteria – Scoring Standards:

Standard Criteria – Scoring Standards ***(Note: Choose minimum of four criteria, maximum of 10, and determine percent weights; percent weights must total 100%)***					
Criteria	**0 Points**	**1 Point**	**2 Points**	**3 Points**	**4 Points**
Existing Congestion **(% weight)**	Volume to capacity less than 0.5	Volume to capacity between 0.51 and 0.75	Volume to capacity between 0.76 and 0.9	Volume to capacity between 0.91 and 1.0	Volume to Capacity over 1.0
Safety Score **(% weight)**	SPOT safety points less than 20	SPOT safety points between 20-40	SPOT safety points between 40-60	SPOT safety points between 60-80	SPOT safety points greater than 80
Cost Effectiveness (Highway) **(% weight)**	Cost per Vehicle/equivalent greater than $1500 per mile	Cost per Vehicle/equivalent between $1000-$1500 per mile	Cost per Vehicle/equivalent between $500-$999 per mile	Cost per Vehicle/equivalent between $500-$250 per mile	Cost per Vehicle/equivalent less than $250 per Mile
Freight Volume **(% weight)**	Less than 500 trucks/equivalent per day	Between 500-2000 trucks/equivalent per day	Between 2000-3500 trucks/equivalent per day	Between 3500-5000 trucks/equivalent per day	More than 5000 trucks/equivalent per day
Transportation Plan Consistency **(% weight)**	Project is not in CTP or TP		Project is in a DRAFT CTP or TP		Project is in an adopted CTP or TP
Corridor Continuity **(% weight)**	Project does not contribute to or continue corridor improvement (not part of a greater corridor vision)	Project contributes to a corridor improvement, but no other corridor work has yet begun (this is the first piece)	Project contributes to corridor improvement already begun or completed, but not in an adjacent section	Project touches on one or both ends of an already completed or underway corridor improvement	Project completes corridor improvement (is the last portion of the corridor)

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Standard Criteria – Scoring Standards (continued) ***(Note: Choose minimum of four criteria, maximum of 10, and determine percent weights; percent weights must total 100%)***					
Criteria	**0 Points**	**1 Point**	**2 Points**	**3 Points**	**4 Points**
Multimodal Accommodations **(% weight)**	Project does not include ped/bike/transit facilities		Project includes isolated ped/bike/transit facilities		Project does include ped/bike/transit facilities AND connects to adjacent bike/ped facilities AND/OR transit facility on one or both ends.
Proximity to Activity Center **(% weight)**	Project does not provide capacity within 10 miles of employment center 0f 50 or more employees, trauma center, institution of higher learning, or tourist center	Project adds capacity and is within 10 miles of employment center of 50 or more employees. trauma centers, institutions of higher learning, or tourist centers	Project adds capacity and is within 5 miles of an employee centers with 50-500 employees, trauma centers, institutions of higher learning, or tourist centers, or is within 5 miles of an employee centers with 50-500 employees	Project adds capacity and is within 5 miles of an employee centers with more than 500 employees, and/or trauma centers, institutions of higher learning or tourist centers	Project adds capacity and is within 1 mile of an employee centers with more than 500 employees, and/or trauma centers, institutions of higher learning or tourist centers
Shoulder Width **(% weight)**	Project does not widen shoulder		Project widens shoulder but does not meet DOT standard		Project widens shoulder to DOT standard
Lane Width **(% weight)**	Project does not increase lane width		Project adds lane width but does not meet DOT standard		Project widens lane width to DOT standard

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Standard Criteria – Scoring Standards (continued) ***(Note: Choose minimum of four criteria, maximum of 10, and determine percent weights; percent weights must total 100%)***					
Criteria	**0 Points**	**1 Point**	**2 Points**	**3 Points**	**4 Points**
Airport Development Model NC Division of Aviation Rating **(% weight)**	Priority 3, Categories 100 – 3000	Priority 2, Categories 100 – 3000	Priority 1, Categories 2100 – 3000	Priority 1, Categories 1300 – 2000	Priority 1, Categories 100 – 1200
Transit Expansion **(% weight)**	Calculated trips/$ is <1	Calculated trips/$ is 1 to 4	Calculated trips/$ is >4 to 20	Calculated trips/$ is >20 to 50	Calculated trips/$ is >50
Rail System Continuity **(% weight)**	Does not contribute toward larger Division system				Does contribute toward larger Division system
Rail System Connections **(% weight)**	Does not build or strengthen transload facility, provides siding, etc.				Does build or strengthen transload facility, provides siding, etc.
Rail Safety **(% weight)**	Does not remove at-grade crossing				Removes at-grade crossing
Ferry Expansion **(% weight)**	Does not provide any replacing or new vessels.		Maintains capacity by replacing vessel		Expands capacity by adding new vessel
Economic Development Potential **(% weight)**	Water and sewer greater than 1 mile away	Water or sewer within 1 miles	Water and sewer within 1 mile	Directly accessible to water or sewer	Directly accessible to water and sewer
Project Readiness **(% weight)**	NEPA not yet begun (no scoping mtg)	NEPA underway (scoping mtg held)	NEPA substantially underway (FEIS or EA complete, or CE well underway; LEDPA selected	NEPA completed (ROD, FONSI, CE approved), ROW plans close to completion.	NEPA completed, a portion of ROW acquired or underway

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Regional Impact Ranking:

Certain highway, aviation, bicycle and pedestrian, ferry, transit, and rail projects are scored at the regional impact level, as well as any projects that cascade into the regional impact category from the statewide mobility category. Each Division Engineer will develop a preliminary ranking score for each project by combining the quantitative scores from the department at a weight of 60% and their division's criteria at a weight of 40%. The resultant preliminary ranking scores will be used to create a preliminary ranking of all projects in the regional impact category.

Quantitative Score from the Department (SQ): [SPOT Score/70*100]*0.60

Criteria Score = CRIT A x %WA + CRIT B x %WB + CRIT C x %WC, etc.

Where CRIT A, CRIT B, CRIT C, etc. are scores given to the criteria chosen by the Division Engineer (value 0-4), and %WA, %WB, %WC, etc. are the % weights assigned by the DE to each of those criteria.

The resultant Criteria Score (a number between 0 and 4) must then be converted to a percentage; this will be the Score Division Component (SDC):

SDC = (Criteria Score/4) x 100%

Where 4 is the maximum possible Criteria Score

The SDC is then combined with the SQ to achieve the Preliminary Ranking Score:

Preliminary Ranking Score = 60% x SQ + 40% SDC

An alternate way of presenting formula:

PRELIMINARY RANKING SCORE = [(SPOT Score Component/Max SPOT Score)x100%]x60% + [(Criteria Score/Max Criteria Score)x100%]x40%

Where Max SPOT Score = 70 and Max Div Score = 4

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Regional Impact Local Input Point Assignment:

The Division Engineer will review the preliminary ranking scores for regional impact highway and non-highway projects to determine preliminary local input assignments. Once the Division Engineer has evaluated the preliminary ranking for projects in their area and determined a preliminary point assignment for each project, he/she will document and post[1] their preliminary point assignments. Each Division Engineer will include in their posted local input methodology the point assignment rationale for their Division. Any justification/rationale for point assignments made by the Division Engineer which deviate from this methodology will be documented and posted[1].

Each Division Engineer will use the preliminary rank-ordered list of projects along with local knowledge as well as information gathered through collaboration and consultation with MPOs, RPOs, local airport, rail and transit operators and input from other interested stakeholders to determine the actual assignment of final local input points. If the resulting point assignments differ from the preliminary point assignments, the Division Engineer will document and post[1] his/her rationale for such adjustments.

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Division Needs Ranking:

Certain highway, aviation, bicycle and pedestrian, ferry, transit, and rail projects are scored at the division needs level, as well as any projects that cascade into the division needs category from the regional impact category. Each Division Engineer will develop a preliminary ranking score for each project by combining the quantitative scores from the department at a weight of 60% and their division's criteria at a weight of 40%. The resultant preliminary ranking scores will be used to create a preliminary ranking of all projects in the regional impact category.

<u>Quantitative Score from the Department (SQ)</u>: [SPOT Score/70*100]*0.60

Criteria Score = CRIT A x %WA + CRIT B x %WB + CRIT C x %WC, etc.

Where CRIT A, CRIT B, CRIT C, etc. are scores given to the criteria chosen by the Division Engineer (value 0-4), and %WA, %WB, %WC, etc. are the % weights assigned by the DE to each of those criteria.

The resultant Criteria Score (a number between 0 and 4) must then be converted to a percentage; this will be the Score Division Component (SDC):

SDC = (Criteria Score/4) x 100%

Where 4 is the maximum possible Criteria Score

The SDC is then combined with the SQ to achieve the Preliminary Ranking Score:

Preliminary Ranking Score = 60% x SQ + 40% SDC

An alternate way of presenting formula:

PRELIMINARY RANKING SCORE = [(SPOT Score Component/Max SPOT Score)x100%]x60% + [(Criteria Score/Max Criteria Score)x100%]x40%

Where Max SPOT Score = 50 and Max Div Score = 4

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Division Needs Local Input Point Assignment:

The Division Engineer will review the preliminary ranking scores for division needs highway and non-highway projects to determine preliminary local input assignments. Once the Division Engineer has evaluated the preliminary ranking for projects in their area and determined a preliminary point assignment for each project, he/she will document and post[1] their preliminary point assignments. Each Division Engineer will include in their posted local input methodology the point assignment rationale for their Division. Any justification/rationale for point assignments made by the Division Engineer which deviate from this methodology will be documented and posted[1].

Each Division Engineer will use the preliminary rank-ordered list of projects along with local knowledge as well as information gathered through collaboration and consultation with MPOs, RPOs, local airport, rail and transit operators and input from other interested stakeholders to determine the actual assignment of final local input points. If the resulting point assignments differ from the preliminary point assignments, the Division Engineer will document and post[1] his/her rationale for such adjustments.

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Step By Step Process for Division Engineers:

- Identify at least four, no more than 10, criteria from list for highway projects; identify at least two criteria (no maximum) from the list for projects in each of the non-highway modes
- Select % weights for each chosen criteria, % weights must total 100%
- For each project, assign value (0-4) for each criteria based on guidelines given in table
- Calculate project's Division Criteria Score according to this formula:

  Division Criteria Score = CRIT A SCORE x %Weight A + CRIT B SCORE x % Weight B + CRIT C SCORE x % Weight C, etc.

  Where CRIT A, CRIT B, CRIT C, etc. are scores given to the criteria chosen by the Division Engineer (value 0-4); Weight A, Weight B, Weight C, etc. are the % weights assigned by the DE to each of those criteria; and where 0<=Division Criteria Score<=4

- Convert Division Criteria Score to % (Division Score Component):

  Division Score Component = (Division Criteria Score/4)x100%

  Where Division Score Component is a percentage and 4 is the maximum possible Division Criteria Score

- Using the Division Score Component, and the previously determined SPOT Score Component, calculate the PRELIMINARY RANKING SCORE:

  PRELIMINARY RANKING SCORE =60% x SPOT Score Component + 40% x Division Score Component

- Rank projects based on PRELIMINARY RANKING SCORE (highest to lowest) and begin assigning local input points
- Publish methodologies prior to and/or in conjunction with posting of preliminary assignment of local input points

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NCDOT Division Engineer Project Solicitation and Ranking Process
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Appendix 1

SAFETY SCORES FOR PRIORITIZATION 3.0

The calculation of safety scores varies depending on whether the project is located along a roadway segment or at an intersection:

Segments → (Crash Density x 33%) + (Severity Index x 33%) + (Critical Crash Rate x 33%)

Intersections → (Crash Frequency x 50%) + (Severity Index x 50%)

Safety scores for segment projects will be calculated automatically in the SPOT On!ine tool, based on a GIS safety score data layer provided by the Mobility and Safety Division. This layer contains the Crash Density, Severity Index, and Critical Crash Rate scores for all segments on state-maintained roadways (each safety component is scored using a 0-100 point scale). Scores are based on a 2010-2012 crash data.

Intersection safety scores will be calculated manually by the Mobility and Safety Division.

Definitions for each safety component are as follows:

- **Crash Density:** Number of reported crashes per mile.

- **Severity Index:** Locations with a high severity index have higher than average injury rates and/or more severe injuries. This index uses the reported "Crash Severity" data described below. NCDOT has established "Equivalent Property Damage Only" (EPDO) coefficients which are used to compare crash severity types among each other. One "B-injury" crash or "C-injury" crash is equivalent to 8.4 "PDO" crashes. One "K-injury" crash or "A-injury" crash is equivalent to 76.8 "PDO" crashes. The severity index of a location is equal to the total EPDO divided by the number of crashes.

  Crash Severity: Crash severity is reported based on the "KABCO" scale. The crash injury status is the most severe injury to a person involved in the crash.
  K-Fatal – A death results from injuries within 12 months after the crash.
  A-Disabling – Prevents the person from performing normal activities for at least one day.
  B- Evident – Obvious injury.
  C- Possible – No visible injury may have momentary loss of consciousness.
  O- Property Damage Only (PDO).

- **Critical Crash Rate:** A statistically derived number, which is often used a screening tool to identify locations where crash rates are higher than should be expected for a given facility type and where further engineering investigations may be considered. Crash Rate is defined for a section of highway as the number of crashes per 100 million vehicle miles travelled.

- **Crash Frequency:** The number of reported crashes during a given timeframe.

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NCDOT Division Engineer Project Solicitation and Ranking Process
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Appendix 2
Calculation of Annual Average Daily Traffic

The NCDOT collects traffic data to monitor the level of travel on North Carolina highways to meet federal reporting requirements and state data needs. A primary statistic used to meet these requirements is Annual Average Daily Traffic (AADT). An AADT is a daily volume estimate of the average traffic traveling in all lanes on a highway. The AADT estimate represents the average daily travel occurring at a location for all days of the year.

On non-freeway highways, short term counts are collected at monitoring stations using tube based counters and seasonal factors are applied to estimate the annual average from those counts. Seasonal factors are generated from continuous count stations where the factors are based on the ratio of the average of all daily volumes throughout the year to the average volume for a particular day of week and month. Each short term count is factored to an AADT estimate based on the day and month collected. Each station typically has 2 days of daily counts collected and the final AADT estimate is generated by averaging the estimates generated for each daily count.

On freeway highways, it is not practical or safe to collect mainline counts using the basic tube counter. The NCDOT employs a ramp balancing methodology to generate AADT estimates on each freeway segment. Counters that use inductance loops or radar detectors are employed to collect short term mainline counts every 5 to 8 interchanges and tube based counters are used to collect short term counts at every ramp. Mainline counts are seasonally factored in the same manner as the non-freeway counts. The AADT estimates on the freeway segments without counts are calculated using the off and on flows measured at each interchange in the ramp counts. The on and off flows are adjusted (balanced) to match the mainline count based AADT estimates prior to generating the calculated AADT on freeway segments not counted.

The NCDOT follows the industry practice of counting only a portion of AADT stations each year to support monitoring more highways. The current practice for counting monitoring stations is either an annual or 2 year cycle. When stations are not counted, AADT estimates are generated by applying growth factors to previous year count based AADT to estimate current year AADT. Average growth factors are generated for each county using count based AADT estimates from stations within the county. This ensures that the AADT estimates for stations not counted are consistent with the growth occurring at stations that were counted in the same county.

The methods used by the NCDOT are consistent with the guidelines specified in the Traffic Monitoring Guide (FHWA 2013), the Guidelines for Traffic Data Programs (AASHTO 2009), and the Highway Performance Monitoring System Field Procedures Manual (FHWA 2013).

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Calculation of Truck Annual Average Daily Traffic

In addition to collecting volume data, the NCDOT collects vehicle classification data to measure the level of truck volume on major NC highways. The statistic used to report truck volume is Truck Annual Average Daily Traffic (AADT). A Truck AADT is a daily truck volume estimate of the average number of trucks traveling in all lanes on a highway. The Truck AADT estimate represents the average daily truck travel occurring at a location for all days of the year.

The NCDOT employs two methods for collection of vehicle classification data, electronic axle based classification and manual classification. The axle based classification method employs the FHWA 13 vehicle class scheme with 3 passenger vehicle and 10 truck classes. Axle sensors are used to measure the number and spacing between axles on a vehicle and the pattern measured determines which class it is assigned. Most locations have class data collected using this method. At locations where it is unsafe to deploy axle sensors or poor traffic flow occurs, the manual classification method is used. Data is collected through direct observation and vehicles are classified into the NCDOT 4 class scheme. This scheme is an aggregation of the FHWA 13 classes with 1 passenger vehicle class and 3 truck classes (FHWA-NCDOT Schemes).

Similar to the volume monitoring process, short term class counts are collected at monitoring stations and seasonal factors are applied to estimate the annual average volume by class. The total volume for a class count is seasonally factored using the same method and factors used for volume counts to generate AADT. The truck classes are seasonally factored to generate truck AADT using the same method but use seasonal factors for the truck classes generated from continuous class stations. Passenger vehicle class estimates are generated by subtracting the truck AADT from the AADT estimate. Manual class are partial day counts that are expanded to daily volume, seasonally factored, and then disaggregated from the NCDOT 4 class scheme to the FHWA 13 class scheme using factors generated from continuous class stations. An annualized class distribution for the FHWA 13 class scheme is calculated for all stations.

Class monitoring stations are counted on a 3 year cycle and cover the National Highway System and the NC Truck Network. Class monitoring is a coarser coverage than volume monitoring where a single class station covers the same extent of highway as multiple volume monitoring stations. The reported truck AADT is calculated by multiplying the annualized truck class distribution from a class station with the AADT for each volume monitoring station on the same extent of highway. This method provides an updated truck AADT estimate each year that matches the volume AADT being reported. The methods used to generate truck AADT are consistent with the guides cited for the volume AADT calculation methodology.

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